

REPLY TO WRITTEN OPINION

To Examiner of the Japanese Patent Office

1. Identification of the International Application
PCT/JP02/02817

2. Applicant

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4. Mailing Date August 2, 2003

5. Contents of Arguments

The reasons that the claimed invention is patentable
will be described below.

5.1 Clarification of Grounds for Amendments

Claims 1, 8, 12, 16, 18 and 19 have been amended to
clarify that the claimed invention has been selected to have
properties to promote specific expression as a promoter.
Further, Claims 18 and 19 have been amended to clarify that
the method comprises the step of selection, and the
expression is to be at a desired site. Further, new Claims
22-27 are added which directed to each of the individual
sequences. These amendments are described and supported on

page 39, lines 9-22 [corresponding to page 46, line 16 to page 47, line 6 in the English language translation]).

Therefore, the amendments raise no new matter issue.

5.2 Features of the Claimed Invention

As can be seen from the Amendments under Article 34 of PCT on the same date, a feature of the claimed invention is:

"A plant comprising at least one promoter promoting a specific level of expression and a gene operably linked to the promoter, wherein the specificity of the promoter is determined based on the expression frequency of the gene including the promoter in a cDNA database in which the gene including the promoter is included, and the promoter is selected as promoting desired specific expression", and a promoter, an expression cassette, an available site and the like which are related to this plant, as well as methods for producing the plant, which are recited as "A method for producing a desired gene product at a desired site, comprising the steps of: determining the specificity of a promoter based on the expression frequency of the gene including the promoter in a cDNA database in which the gene including the promoter is included, and selecting the promoter which promotes desired specific expression; producing a linked mixture by operably linking the promoter and a nucleic acid molecule encoding the desired gene product; introducing the linked mixture into a plant; growing the plant; and collecting the desired gene product in the plant" and "A method for producing a plant specifically expressing a desired gene product at a desired site, comprising the steps of: determining the specificity of a promoter based on the expression frequency of the gene including the promoter in a cDNA database in which the gene including the promoter is included, and selecting the promoter which promotes desired specific expression;

producing a linked mixture by operably linking the promoter and a nucleic acid molecule encoding the desired gene product; introducing the linked mixture into a plant; and growing the plant".

The present invention has a feature where the promoters used are selected whether the expression thereof is specific or not based on a database covering the presence and absence of expression in a variety of statuses such as benzyl adenine treated callus, gibberellin treated callus, heat shock treated callus, callus in the growth period, young root, young green leaves, young etiolated leaves, and flowering ear. The applicant believes that such a feature and the effects attained thereby should be significant which could not be attained by the use of the conventional technology, in that the claimed invention has such a specificity and uses such a specificity, and the specificity is clearly comprehensive.

5.3 Subject Matter of Documents Cited in PCT Written Opinion

Document 1 and Document 2 identify a promoter using data of differential display which is used as a standard technology, however, fail to test the expression of those other than wounded callus (Document 1) and photosynthesis system (Document 2). Accordingly, these documents do not describe or suggest promoters, the specificity of which is determined based on an exhaustive database in which the expression of promoters are exhaustively examined, and is selected as promoting desired specific expression.

Documents 3-5 describe the use of promoters for some purposes. However, these documents do not describe or suggest promoters, the specificity of which is determined based on an exhaustive database in which the expression of promoters are exhaustively examined, and is selected as promoting desired specific expression.

5.4 Comparison between the Claimed Invention and the Subject Matter of Documents

As described above, the claimed invention has a feature where a promoter is used, the specificity of which is determined based on a database covering the states of the presence and absence of expression in a variety of states, and which promoter is selected as promoting desired specific expression.

On the other hand, none of Documents 1-5 fail to describe or suggest a promoter, the specificity of which is determined based on a database covering the states of the presence and absence of expression in a variety of states, and which promoter is selected as promoting desired specific expression. Further, needless-to-say, the use of such a promoter is not suggested therein. Accordingly, Documents 1-5 cannot be recognized to describe or suggest the claimed invention which has a feature where a promoter is used, the specificity of which is determined based on a database covering statuses of the presence and absence of expression in a variety of the states, and which promoter is selected as promoting desired specific expression.

As described above, the claimed invention is not described or suggested in any of the documents cited. Accordingly, in view of the state of the art as of the priority date of the present application, the claimed invention is not obvious over Documents 1-5 or any combination thereof.

Thus, the Applicant considers that there is no reason that the claimed invention lacks inventive step. The Applicant respectfully requests that the Examiner will issue an International Preliminary Examination Report describing that all of the claims have novelty (N), inventive step (IS), and industrial applicability (IA).